

What is claimed is:

1. A semiconductor apparatus comprising:

a semiconductor device;

a first dielectric board surrounding the semiconductor device;

a second dielectric board surrounding the semiconductor device and arranged on the first dielectric board;

a metal cover arranged on the second dielectric board and above the semiconductor device;

plural external electrodes;

a first through-hole wiring penetrating the first dielectric board and electrically connected with the external electrodes;

a second through-hole wiring penetrating the second dielectric board and electrically connected with the semiconductor device; and

an internal wiring inserted between the first dielectric board and the second dielectric board;

the semiconductor device being connected with the external electrodes via the first through-hole wiring, the second through-hole wiring and the internal wiring;

the first through-hole wiring and the second through-hole wiring being electrically connected with the internal wiring while being away from each other.

2. The semiconductor apparatus as claimed in claim 1,

wherein the second through-hole wiring is arranged more closely to the semiconductor device than the first through-hole wiring is.

3. The semiconductor apparatus as claimed in claim 2, further comprising:

a thin metal wire connected to the semiconductor device;  
and

an upper wiring arranged on the second dielectric board and connected with the second through-hole wiring;

the semiconductor device being connected to the upper wiring via the thin metal wire.

4. The semiconductor apparatus as claimed in claim 1, further comprising a metal plate having the semiconductor device mounted thereon,

the external electrodes and the metal plate being arranged on the same virtual plane.

5. The semiconductor apparatus as claimed in claim 1, wherein the whole external electrodes are arranged within an outer edge of the first dielectric board or the second dielectric board.

6. The semiconductor apparatus as claimed in claim 1, wherein a part of the external electrodes is an external electrode for grounding, and an upper metal layer supplied with a ground potential via the external electrode for grounding is provided on an upper surface of the second dielectric board.

7. The semiconductor apparatus as claimed in claim 1, wherein a part of the external electrodes is an external electrode for grounding, and a lower metal layer supplied with a ground potential via the external electrode for grounding is provided on a lower surface of the first dielectric board.